

# WELCOME TO ALS 4162 & ALS 6935

## Consequences of Biological Invasions

### 3 Credits

**Time Offered:** T, R Class Periods 3-4 (9:35am-11:30am)

**Location Offered:** Bldg 970 Room 1027 and Sakai

A course website link will be available on the Entomology and Nematology Department's website at: <http://entomology.ifas.ufl.edu/accordent/cuda/L#>, where # represents the lecture # (e.g., L1, L2, L3).

**Instructor:** James P. Cuda, Ph.D.

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Office Hours: Tuesday, and Thursday 9:00am-10:00am or by appointment.

Class members will be notified via a course list-serv if office hours are unavailable in a given week. Faculty members are subject to university, college and departmental commitments, and it is recommended that you contact the instructor prior to coming to the office outside of the designated time for office hours.

### **REQUIRED TEXTBOOK AND OTHER RESOURCES**

Biological Invasions: Economic and Environmental Costs of Alien Plant, Animal and Microbe Species, 2<sup>nd</sup> Edition. David Pimentel (ed.), 2011, ISBN# 978-1-4398-2990-5, CRC Press

This book can be purchased at the UF bookstore, through various online vendors, or is available as an eBook at <http://site.ebrary.com/lib/univflorida/docDetail.action?docID=10473079>.

The textbook will be used for most of the lectures, and also for supplemental reading assignments. Exams will include information from lectures, assigned textbook readings, and other reading assignments.

#### Current Events Website References

In addition to relevant articles that will be provided to students as PDF files online, the following websites will be used as source resources for current pest news and events:

- 1) <http://www.doacs.state.fl.us/pi/index.html>
- 2) <http://edis.ifas.ufl.edu/>
- 3) <http://www.invasive.org/>
- 4) <http://www.fleppc.org/index.cfm>
- 5) <http://tncinvasives.ucdavis.edu/>
- 6) <http://www.gisnetwork.org/>
- 7) <http://i3n.iabin.net/>
- 8) <http://www.invasivespeciesinfo.gov/>

Note that most of these websites link to other relevant websites that may be useful for current event news.

### COURSE PREREQUISITE OR COREQUISITE

- 1) Integrated Principles of Biology 1 and Laboratory (BSC 2010 and 2010L) or equivalent.
- 2) Integrated Principles of Biology 2 and Laboratory (BSC 2011 and 2011L) or equivalent.

### COURSE OBJECTIVES

From the lecture and course assignments, students will gain an understanding of the following concepts:

- 1) A global awareness of the economic costs and environmental impacts of biological invasions.
- 2) An understanding of the principles and basic practices of pest exclusion, eradication, and management tactics for biological invaders from six continents.
- 3) An ability to assimilate information on biological invaders, and develop inferences from case study examples.
- 4) A perspective on the research, extension, and regulatory components of biological invaders.
- 5) An awareness of biological invaders in current events reported in the popular and scientific media.

### COURSE DESCRIPTION

“This course focuses on non-native species invasions and environmental effects of these invaders. Students will develop analytical capabilities to assess the consequences of biological invasions.”

This course is oriented toward students in the Biosecurity track major in the Entomology Department.

### COURSE OUTLINE

WEEK	LECTURE/ACTIVITY	READINGS
1	Review of Syllabus and Delivery Platform  <b>Activity 1 (Due Week 12): Present a 5-10 minute PowerPoint presentation on an invasive species of your choice. Include information on its origin, biology, environmental and economic impacts.</b>  Introduction: Non-Native Species in the World	Chapter 1
1	The Impacts of Alien Plants in Australia	Chapter 2
2	Environmental and Economic Costs of Invertebrate Invasions in Australia	Chapter 3
2	Invasive Vertebrates in Brazil	Chapter 4
3	The IFAS Assessment of Non-Native Plants in Florida's Natural Areas	
3	Alien Plants in Britain	Chapter 5
4	Economic, Environmental and Social Dimensions of Alien Vertebrate Species in Britain	Chapter 6
4	Impacts of Alien Vertebrates in Europe	Chapter 7
5	Invasive Patterns of Alien Terrestrial Invertebrates in Europe	Chapter 8
5	<b>EXAM 1-NO LECTURE (WEEKS 1-5)</b>	
6	Invasive Plant Pathogens in Europe	Chapter 9
6	Invasive Plants in the Indian Subcontinent	Chapter 10
7	Invasive Invertebrates in India: Economic Implications	Chapter 11
7	Economic Impacts of Weeds in New Zealand: Some Examples	Chapter 12

8	Ecological and Economic Costs of Alien Vertebrates in New Zealand	Chapter 13
8	The Economic Consequences of the Environmental Impacts of Alien Plant Invasions in South Africa	Chapter 14
9	<b>SPRING BREAK</b>	
10	Invasive Vertebrates of South Africa	Chapter 15
10	Rodents and Other Vertebrate Invaders in the United States	Chapter 16
11	Environmental and Economic Costs Associated with Alien Invasive Species in the United States	Chapter 17
11	<b>EXAM 2-NO LECTURE (WEEKS 6-11)</b>	
12	Review of IFAS Assessment of Non-Native Plants  <b>Activity 2 (Due 04-4-13): Determine if the Proposed Biofuel Plant <i>Pennisetum purpureum</i> is Potentially Invasive in Florida by Completing the WRA at:</b> <a href="http://plants.ifas.ufl.edu/assessment/pdfs/predictive_tool.pdf">http://plants.ifas.ufl.edu/assessment/pdfs/predictive_tool.pdf</a>	
12	Student Presentations	
13	Student Presentations	
13	Student Presentations <b>Activity 2 Due</b>	
14	Student Presentations	
14	Student Presentations	
15	Student Presentations	
15	Student Presentations	
16	Student Presentations ( if necessary) Course and Instructor Evaluation (5 points for completing evaluation)  Review for Final Exam	

16	<b>READING DAY- NO CLASSES</b>		
17	<b>EXAM 3- COMPREHENSIVE FINAL EXAM</b>		

### GRADING POLICY

#### EVALUATION

Exam 1 100 points  
 Exam 2 100 points  
 Activity Assignments 50 per Activity (100 points)  
 Class Participation 25 points  
 Course Evaluation 5 points  
 Final Exam 100 points

**Total ALS 4162 430 points** Undergrads

**Total ALS 6935 530 points** Graduate Students

Featured Creature Report 100 Points

<b>Final Grading</b>	<b>Scale: Percentage</b>
A	93-100
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
E	0-59

**Note: You should receive an electronic evaluation from the Dean's office at UF. Please fill out this evaluation to assess the quality of the course.**

#### ASSIGNMENTS

##### Activity Assignments

Two activity assignments, valued at 50 points each, are required during the course. The deadline for each activity assignment is listed in the course syllabus. Activities may be completed prior to the deadline, but otherwise are due at 5pm on the class date listed.

- 1) Activity 1, 'Present a brief PowerPoint presentation on an invasive species of your choice. Students must include key elements listed in the course syllabus.
- 2) Activity 2, 'Weed Risk Assessment'. Students must complete a risk assessment for *Arundo donax*.

#### CLASS PARTICIPATION

This is a live and distance education course, and class participation is expected. Distance Ed students are required to submit multiple choice questions for each chapter. Lectures will be recorded and available to students in the event of an absence. Students are allowed 4 absences without a point deduction for class participation. Following the 5<sup>th</sup> absence, 5 points will be deducted from class participation points. In order to avoid a point deduction, students must show proof of illness from a doctor or infirmary for all absences (i.e. even the 4 allowed absences).

#### DESCRIPTION OF E-LEARNING REQUIREMENTS

##### E-MAIL/GATORLINK ACCOUNT REQUIREMENTS

You will be required to get a Gatorlink computer account through the university. This service is free to all students. Using this account, you will be able to send and receive e-mail and access the World Wide Web from home or school. Instructions for getting a Gatorlink account can be found at <http://www.gatorlink.ufl.edu/>. **You must correspond through this e-mail account. You must have a Gatorlink account to access and complete exams as they will be delivered through Sakai.** Other

servers such as aol, yahoo, msn, etc. have trouble communicating with UF. If you use an account other than Gatorlink, your e-mails may not be received by your instructor. Also, I will communicate with you via a course list-serv using only Gatorlink accounts.

### **GENERAL E-LEARNING INSTRUCTIONS**

- 1) If you forget where to go for course information, go to [http://entnemdept.ufl.edu/dept\\_disted.htm](http://entnemdept.ufl.edu/dept_disted.htm), and click on ENY 400X(Cuda)
- 2) Link to <http://lss.at.ufl.edu/>.
- 3) Enter your Gatorlink username and password and click 'ok'.
- 4) Click on ENY 400X Spring Semester.

### **EXAM INFORMATION-E LEARNING**

#### **Exams - Exams will be given electronically using Sakai.**

There will be three exams during the semester, which includes the final exam. The final exam will be comprehensive and will be composed of 50 points of new material and 50 points of previous material. You must have a Gatorlink account to access the exams. The exams will be available for one day 8:00 AM until 11:59 PM. You will not be allowed to take the exam after the exam date unless prior arrangements have been made.

You will be asked to lock your browser for the exam. You may not cut and paste information or consult current or former students for answers. You may be asked to submit exams to "Turn It In" for plagiarism evaluation. There is no time limit for the exam, but once you begin the exam, it must be submitted. On average, the exam takes about 90 minutes to complete. *Please try not to take longer than 2 hours on any exam. Grades will be posted one to two weeks following the exam using the ELearning grade book.*

### **RESPONDUS BROWSER LOCK SOFTWARE DOWNLOAD REQUIRED**

Before the first exam, you will need to go to <http://www.respondus.com/lockdown/information.pl?ID=364713981> and download the Respondus Browser Lock software. There is a video explaining the download process at <http://lss.at.ufl.edu/services/respondus/>. If you forget, you will have the option to download the program when you try to open the exam, but it would be best for you to do it ahead of time in case you have problems and need to call the help desk. You will need to have this software before you can access the exam. The program will need to be installed on whichever computer you are going to use to take the exam. All the computer labs on campus have the software installed. Again, you will not be able to access the exam without this software. Also, you will need to have Internet Explorer installed to use the Respondus software.

### **POLICY STATEMENTS: ACADEMIC HONESTY, SOFTWARE USE, UF COUNSELING SERVICES, SERVICES FOR STUDENTS WITH DISABILITIES**

In 1995, the UF student body enacted a new honor code and voluntarily committed itself to the highest standards of honesty and integrity. When students enroll at the university, they commit themselves to the standard drafted and enacted by the students.

In adopting this honor code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the university community. Students who enroll at the university commit to holding themselves and their peers to the high standard of honor required by the honor code. Any individual who becomes aware of a violation of the honor code is bound by honor to take corrective action. The quality of a University of Florida education is dependent upon community acceptance and enforcement of this honor code.

**The Honor Code: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.**

On all work submitted for credit by students at the university, the following pledge is either required or implied: **“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”**

The University requires all members of its community to be honest in all endeavors. A fundamental principle is that the whole process of learning and pursuit of knowledge is diminished by cheating, plagiarism and other acts of academic dishonesty. In addition, every dishonest act in the academic environment affects other students adversely, from the skewing of the grading curve to giving unfair advantage for honors or for professional or graduate school admission. Therefore, the university will take severe action against dishonest students. Similarly, measures will be taken against faculty, staff and administrators who practice dishonest or demeaning behavior.

Students should report any condition that facilitates dishonesty to the instructor, department chair, college dean or Student Honor Court.

It is assumed all work will be completed independently unless the assignment is defined as a group project, in writing by the instructor. This policy will be vigorously upheld at all times in this course.

**SOFTWARE USE:** All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate.

**CAMPUS HELPING RESOURCES:** Students experiencing crisis or personal problems that interfere with their general wellbeing are encouraged to utilize the university’s counseling resources. Both the Counseling Center and Student Mental Health provide confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal or lacking clear career and academic goals, which interfere with their academic performance. The Counseling Center is located at 301 Peabody Hall (next to Criser Hall). Student Mental Health is located on the second floor of the Student Health Services in the Infirmary.

1. *University Counseling Center*, 301 Peabody Hall, 392-1575; personal and career counseling:

[www.counsel.ufl.edu/](http://www.counsel.ufl.edu/)

2. *Student Mental Health*, Rm. 245 Student Health Care Center, 392-1171, personal counseling:

[www.shsc.ufl.edu/smhs/](http://www.shsc.ufl.edu/smhs/)

Alcohol and Substance Abuse Program (ASAP)

Center for Sexual Assault/Abuse Recovery & Education (CARE)

Eating Disorders Program

Employee Assistance Program

Suicide Prevention Program

3. *Career Resource Center*, DR-100 J.W.Reitz Union, 392-1602, career development assistance and counseling.

**Students with Disabilities:** The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. 0001 Reid Hall, 392-8565,

[www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/)

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You will be expected to sign a copy of this statement and return it to the instructor.

**“I have read and I understand the information in the course syllabus.”**

Printed name: \_\_\_\_\_ Signature: \_\_\_\_\_

Date: \_\_\_\_\_